OCZ STORAGE SOLUTIONS | A Toshiba Group Company

Intrepid 3000 Series – MLC & eMLC

SATA 3.0 2.5” Enterprise SSD

Maximize, Optimize, and Modernize with Quick and Reliable Data Access

Intrepid 3000 SSDs overcome today’s data integrity and performance inconsistency challenges and enable you to flash-optimize your business or application seamlessly and with complete confidence. With an advanced enterprise-grade feature-set, Intrepid delivers leading performance, endurance, and reliability ideal for mega data centers and makers of storage appliances.

Essential to most business applications is efficient, predictable performance. Intrepid’s enhanced latency access reveals a faster and more responsive storage environment for your IT applications. With ever shrinking flash nodes, endurance and reliability are always a concern. Through innovative flash management technology, Intrepid significantly improves endurance and data integrity above and beyond the specifications of the flash itself leading to superior total cost of ownership.

Designed with cost-effectiveness in mind, Intrepid doesn’t make you choose between value and features — Intrepid delivers class-leading enterprise storage where optimum performance backed by high endurance and reliability are critical.

Quick Specs

- Up to 540 MB/s Sequential Read
- Up to 470 MB/s Sequential Write
- Up to 92,000 IOPS 4KB Random Read
- Up to 40,000 IOPS 4KB Random Write
- Available in 100-1920GB
- 5-Year Warranty; Dedicated FAE support

Worry-free Power Loss Protection

Full in-flight data protection in the event of a sudden power failure ensures in-progress write operations complete and data is properly stored

Enhanced Data Reliability

Advanced ECC is more robust and reliable than traditional ECC algorithms enabling four Drive Writes Per Day (3800 series) or one DWPD (3600 + 3700 series) for a five year period

Dependable Data Redundancy

Internal SSD RAID functionality provides additional safeguards to supplement traditional ECC algorithms and further reduce uncorrectable bit error rates

End-to-End Data Path Protection

Performs data integrity checks at every juncture where data is transmitted and received to ensure corrupted data is detected and not propagated

Intrepid 3000 offers several OEM-friendly features that enable faster service and seamless deployments.

Enhanced Logging

New logging capabilities for proactive drive monitoring

Locked Firmware

Locked firmware for long term fixed customer solutions

Increased Awareness

Advanced enterprise SMART attributes for advanced product health monitoring

Reduced Management Efforts

Monitor and optimize drives from one location with StoragePeak 1000

Specifications

Physical	3600 Model	3700 Model	3800 Model
Usable Capacities (IDEMA)	100GB / 200GB / 400GB / 800GB	240GB / 480GB / 960GB / 1920GB	100GB / 200GB / 400GB / 800GB
NAND Components	Toshiba 19nm MLC	Toshiba A19nm Enterprise MLC	Toshiba 19nm Enterprise MLC
Interface	Serial ATA (SATA) 3.0 6Gb/s	Serial ATA (SATA) 3.0 6Gb/s	Serial ATA (SATA) 3.0 6Gb/s
Form Factor	2.5 inch	2.5 inch	2.5 inch
NAND Controller	Marvell 88SS9187 + OCZ Enterprise Firmware	Marvell 88SS9187 + OCZ Enterprise Firmware	Marvell 88SS9187 + OCZ Enterprise Firmware
Dimensions (L x W x H)	69.75 x 100 x 9.20mm	69.75 x 100 x 9.20mm	69.75 x 100 x 9.20mm
Weight	102g (weight varies by capacity)	102g (weight varies by capacity)	102g (weight varies by capacity)

Performance - 3600 Model	100GB	200GB	400GB	800GB
Sustained Sequential Read[1,2]	400 MB/s	475 MB/s	515 MB/s	510 MB/s
Sustained Sequential Write[1,2]	265 MB/s	405 MB/s	465 MB/s	465 MB/s
Sustained 4KB Random Read[1,2]	77,000 IOPS	92,000 IOPS	90,000 IOPS	90,000 IOPS
Sustained 4KB Random Write[1,2]	21,000 IOPS	31,000 IOPS	38,000 IOPS	38,000 IOPS

Performance - 3700 Model	240GB	480GB	960GB	1920GB
Sustained Sequential Read[1,2]	480 MB/s	520 MB/s	530 MB/s	540 MB/s
Sustained Sequential Write[1,2]	210 MB/s	380 MB/s	450 MB/s	470 MB/s
Sustained 4KB Random Read[1,2]	85,000 IOPS	91,000 IOPS	82,000 IOPS	70,000 IOPS
Sustained 4KB Random Write[1,2]	5,000 IOPS	13,000 IOPS	12,000 IOPS	9,000 IOPS

Performance - 3800 Model	100GB	200GB	400GB	800GB
Sustained Sequential Read[1,2]	400 MB/s	415 MB/s	510 MB/s	500 MB/s
Sustained Sequential Write[1,2]	235 MB/s	400 MB/s	465 MB/s	460 MB/s
Sustained 4KB Random Read[1,2]	91,000 IOPS	92,000 IOPS	90,000 IOPS	90,000 IOPS
Sustained 4KB Random Write[1,2]	21,000 IOPS	31,000 IOPS	38,000 IOPS	40,000 IOPS

[1] Sustained performance measured using IOMeter 2010.
[2] Drives were preconditioned using IOMeter 2010, QD 128
Measurements are performed using SNIA based metrics.

Environmental

Power Consumption[3]	Idle: 2.0W (Typical) Active: 3.4W (Typical)
Operating Temperature[4]	0°C ~ 70°C
Storage Temperature	-45°C ~ 85°C
Certifications and Declarations	CE, FCC, KCC, C-Tick, BSMI, VCCI, UL, Microsoft WHQL, SATA IO
Product Ecological Compliance	RoHS

[3] Based on 5V supply
[4] As measured by temperature sensor

Reliability/Security

MTBF	2 million hours
Bit Error Rate (BER)	1 sector per 10^{-17} bits read
Power Fail Protection	Full in flight data protection for unexpected system power loss
Data Path Protection	End to End protection via CRC
Data Encryption	256-bit AES-compliant
Product Health Monitoring	Self-Monitoring, Analysis and Reporting Technology (SMART) Support with enterprise attributes

Compatibility

Serial ATA (SATA)	Serial ATA Revision 3.0. Fully compliant with ATA/ATAPI-8 Standard Native Command Queuing (NCQ)
Operating Systems	Windows 7 / Windows 8 / Server 2008/2012 / Server 2008 R2 / Oracle Enterprise(6.4) / RedHat Enterprise(6.4) / CentOS 6.4 / Open SUSE Linux Enterprise Server 12.3 / Ubuntu Server 12.4.4 LTS / MINT 15 3.8 / SLES ll SP2 3.0.13
Power Management	Supports ATA Power Management Specification

Additional Features

Performance Optimization	TRIM (requires OS support)
Optimized Sustained Latency Performance	Consistent latency IO operations regardless of data entropy
Temperature Sensor	Temperature monitoring and logging
Service & Support	5 year warranty; Dedicated FAE support

Ordering Information	Part Number	UPC	Raw	Usable	Write Endurance
Intrepid 3600 Model	IT3RSK41MT300-0100	842024034360	128 GB	100 GB	1 DWPD
	IT3RSK41MT300-0200	842024034377	256 GB	200 GB	1 DWPD
	IT3RSK41MT310-0400	842024034384	512 GB	400 GB	1 DWPD
	IT3RSK41MT320-0800	842024034391	1024 GB	800 GB	1 DWPD
Intrepid 3700 Model	IT3RSK41ET5F0-0240	842024036906	256 GB	240 GB	1 DWPD
	IT3RSK41ET5G0-0480	842024036913	512 GB	480 GB	1 DWPD
	IT3RSK41ET5G0-0960	842024036920	1024 GB	960 GB	1 DWPD
	IT3RSK41ET5H0-1920	842024036937	2048 GB	1920 GB	0.5 DWPD
Intrepid 3800 Model	IT3RSK41ET330-0100	842024034407	128 GB	100 GB	4 DWPD
	IT3RSK41ET330-0200	842024034414	256 GB	200 GB	4 DWPD
	IT3RSK41ET340-0400	842024034421	512 GB	400 GB	4 DWPD
	IT3RSK41ET350-0800	842024034445	1024 GB	800 GB	4 DWPD